Determination of Public Land (Rangeland) Health for 64078 TWO MOUNTAIN RANCH

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for the implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on the assessments, it is my determination that the public land within the Two Mountain Ranch allotment #64078 meets the Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ T. R. KREAGER	8/4/04
Assistant Field Manager	Date

Standards of Public Land Health
Evaluation of 64078 TWO MOUNTAIN RANCH Allotment
[04/15/2004]

The Roswell Field Office conducted rangeland health assessments at one study site within the Two Mountain Ranch Allotment #64078. The assessments looked at the Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of each study site. Existing monitoring data was incorporated into and in support of the field assessment. The summary of each assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
64078-IDSU-A167 (*)	X			X			N/A		

Twenty-two indicators for Rangeland Health were evaluated for the public land on the Two Mountain allotment #64078. Ten of these assessed soil site stability, 11 hydrologic function and 13 biotic integrity. These qualitative assessments in conjuction with quantitative information gathered from previous data collected on one location were utilized to assess the rangeland health of the public land within the allotment. This allotment is in the "C" (custodial) category due to the small amount of public land present.

The dry conditions occurring over the last several years have impacted this allotment and surrounding area. The majority of the public land evaluated is on the upland portion of Section 21 but also includes a small portion of the Felix River to the north. Monitoring information however has not been collected since 1991 on approximately 320 acres/133 hectares on this SD-3 loamy ecological site. The soil association is Pecos-Dev which occurs in valleys of the limestone hills and along drainages in the west and southwest of the survey area.

The public land tract assessed, rated the majority of indicators in the None to Slight to Slight to Moderate category. Bareground however rates at Moderate to Extreme. An estimate of 70-80% currently exceeds the upper expected range for the ESD of 40-50%. Large patches of areas void of ground cover are common with burrograss (Scleropogon brevifolius) and tobosa (Pleuraphis mutica) observed only in limited amounts. Gullies are evident only on the Rio Felix portion, but were not representative of the entire area. This indicator rates at None to Slight. A number of functional/structural groups has been reduced as the grama (Bouteloua spp.) as well as dropseed (Sporobolus spp.) grasses are

missing. This indicator rates at Slight to Moderate. The percentage of litter present falls in the bottom end of the range expected with a current estimate of 10-15%. This indicator rates Moderate. Annual production shows approximately 1/2 of potential and also rates Moderate. The southern swale next to the hilly portion is observed with much more growth as the tobosa has settled in the drainage. Burrograss is the dominant species at present but about 20% seen is dead or decadent. This indicator for plant mortality rates Slight to Moderate. Invasive plants rates Moderate with cholla (Opuntia spinosa) scattered throughout and yucca (Yucca spp.) in the tobosa swale. Due to the patchiness of vegetation, the reproductive capability of perennial plants rates Moderate. Tiller and seed production is somewhat limited.The biological crusting occurring is only a minor component along with broken continuity in the physical crusting. This indicator rates in the Moderate category. The area is habitat for muledeer (Odocoileus hemionus) and pronghorn (Antilocapra americana) and provides adequate cover for both.

Wildlife - Evaluation of the integrity of the biotic community considered several indicators as attribute indices for the area of interest. Biotic indicators are interrelated with several other indicators, including soil/site stability, hydrologic function, and vegetation. Several indicators are singularly biotic and address the vegetative aspect of the ecological site description, such as annual production, invasive plants, and reproductive capability of perennial plants, as discussed above. Specifically, four biotic indicators fell within the Moderate rating, those mentioned above and litter amount. Considering present climate regimes, these indicators can be expected to fall within the normal range of variability. Rangeland conditions must be closely monitored to detect any further downward trend, exclusive of the impacts of ongoing climatic conditions (drought). The potential to improve rangeland conditions exists especially when timed with adequate precipitation and vegetation reproduction.

In addition to the standard worksheet biotic factors, four specific wildlife indicators and descriptors are included in this evaluation. Wildlife Habitat and Population indicators rate Slight to Moderate, primarily for desert muledeer, pronghorn and a variety of non-game terrestrial species, including raptor species. The composition of vegetation reflects current climatic conditions, e.g., drought for the past several years. Range site production and cover of a variety of preferred plant species for wildlife, such as forbs and woody browse species, and the availability of seed for food and regeneration, is moderated by climate and land use. Current observed wildlife populations reflect habitat condition. With respect to Special Status Species, none are known to occur in the area of interest at this time and the Habitat and Population indicators are, therefore, rated None to Slight.

Hydrology - The bare ground indicator rated as moderate to extreme. The amount of bare ground has possibly increased due to recent dry conditions and also wind and water erosion processes. The litter amount rated in the moderate category. The decrease in litter amount suggests that the dry conditions have had a negative affect on the growing conditions which decreases the amount of litter that is produced. Additionally, the decrease in litter amount can have the effect of increasing the amount of bare soil. The physical/biological crust indicator rated as moderate. The physical and biological soil

crusts were only found in protected areas with a minor component in interspaces. Sand and gravel deposits of Quaternary alluvial and terrace gravel deposits outcrop in the area.

It is the professional opinion of the Assessment Team that the public land within the Two Mountain allotment #64078, meets the Upland and Biotic standards. There are no Riparian issues associated with this assessment, therefore this standard was not addressed. See recommendations and sites notes for specific information regarding the assessment on this ecological site.

The (*) indicates that the assessment had one or more indicator(s) rated moderate/extreme or extreme. These indicators are:

- Bare Ground

These indicators by themselves are not enough to rate the site as not meeting a standard but may warrant future monitoring.

Recommendations: It is highly recommended this site be monitored at more frequent intervals. Quantitative information is very vital to ensure that proper decisions be reached in administering the public land within this allotment. The drought has obviously impacted the vegetative component as well as the soil attributes here. With proper timely rest from grazing pressure, this site as well as the surrounding vicinity can greatly benefit and improve in overall condition. A more critical evaluation must be conducted to monitor the headcutting coming off the Rio Felix just north of the two-track leading into the area.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64078-IDSU-A167			
Legal Land Desc	SWNE 21 0140S 0240E Meridian 23	Acreage	320
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060009040 FELIX		
Observers	NAVARRO/BAGGAO	Observation Date	04/15/2004
County Soil Survey	NM666 CHAVES SOUTH	Soil Var/Taxad	
Soil Map Unit	PH	Soil Taxon Name	PECOS
Texture Class	NM666 GR-L	Soil Phase	PECOS-DEV
Texture Modifier	NM666 SILTY CLAY LOAM		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	9.1	NOAA Growing Season Precipitation	6.47
NOAA Avg Annual Precipitation	13.47	NOAA Avg Growing Season Precipitation	10.45
Disturbances and Animal Use:			

Part 2. Attributes and Indicators

		Departure from Ecological Site Description/Ecological Reference Areas				
Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:						
S H	Water Flow Patterns					X
Comments:						
S H	Pedestals and/or Terracettes				X	
Comments:	Some evidence of past pedestaling.					

S H	Bare Ground		X			
Comments:	Now estimated at 70-80%. Exceeds upper range.					
S H	Gullies					X
Comments:	Excluding Rio Felix, there is no gullying.					
S	Wind-scoured, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement				X	
Comments:	Wind has moved litter.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:	Slight reduction in soiul surface stability.					
S H B	Soil Surface Loss or Degradation					X
Comments:						
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff					X
Comments:	Burrograss dominating.					
S H B	Compaction Layer					X
Comments:	Only on road leading in.					
B	Functional/Structural Groups				X	
Comments:	Absence of gramas, forbs and dropseeds.					
B	Plant Mortality/Decadence				X	
Comments:	Some mortality on burrograss and tobosa, mostly due to drought.					
H B	Litter Amount			X		
Comments:	Percentage falls in the bottom end of the range.					

B	Annual Production			X		
Comments:	Lack of production, excluding the swale.					
B	Invasive Plants			X		
Comments:	Cholla, (Yucca in swales). scattered at best.					
B	Reproductive Capability of Perennial Plants			X		
Comments:	Tiller and stolon formation is limited, mostly due to drought.					
S	Physical/Chemical/Biological Crusts			X		
Comments:	Physical crusting with biological crusts as minor component in interspaces.					
B	Wildlife Habitat				X	
Comments:	Generally, a grassland habitat in slightly rolling hills with a major drainage, the Rio Felix.					
B	Wildlife Populations				X	
Comments:	No specific wildlife population data at this time. Species of concern include desert mule deer, pronghorn antelope and a variety on terrestrial non-game wildlife species, including raptors.					
B	Special Status Species Habitat					X
Comments:	None known to occur.					
B	Special Status Species Populations					X
Comments:	None known to occur.					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	1	1	2	6

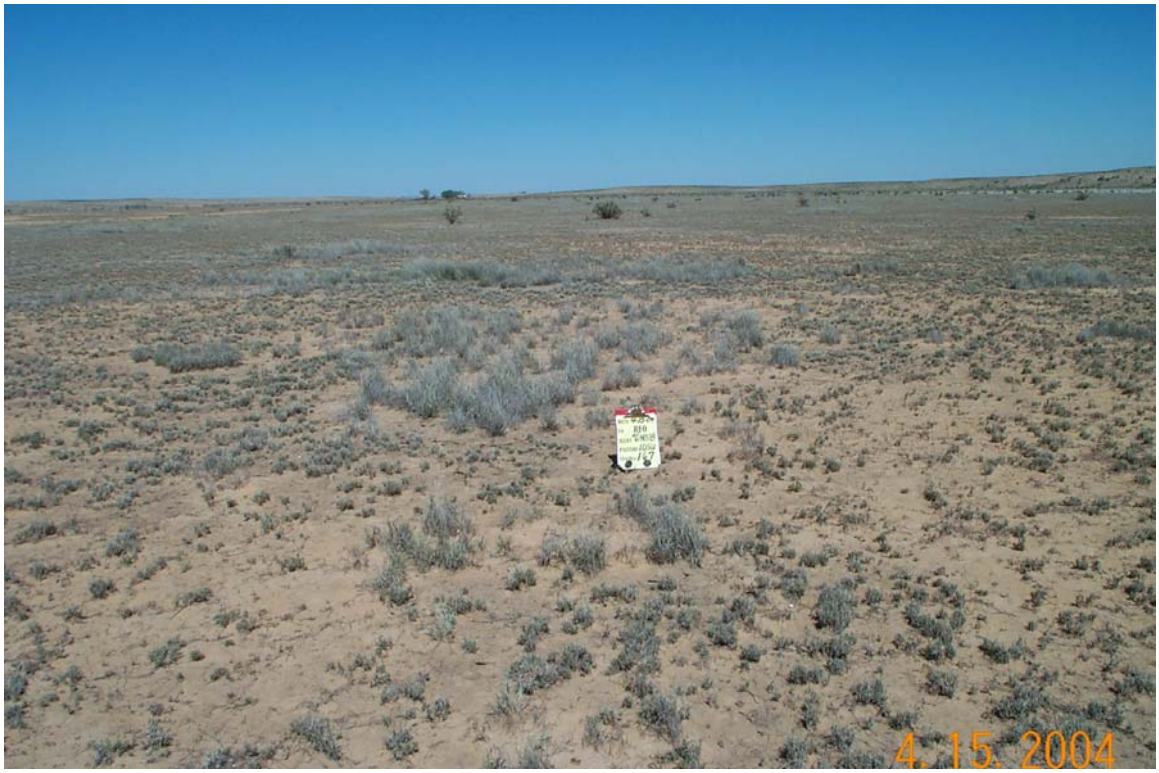
H	Hydrologic	0	1	1	3	6
B	Biotic	0	0	4	5	4

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil		1	1	8
Hydrologic		1	1	9
Biotic		0	4	9

Site Notes: Pronghorn (Antilicapra americana) and mule deer (Odocoileus hemionus) habitat. Site was located within the largest block of public land in section 21. Site was also gps'd. Part of the Rio Felix can be found on this site.

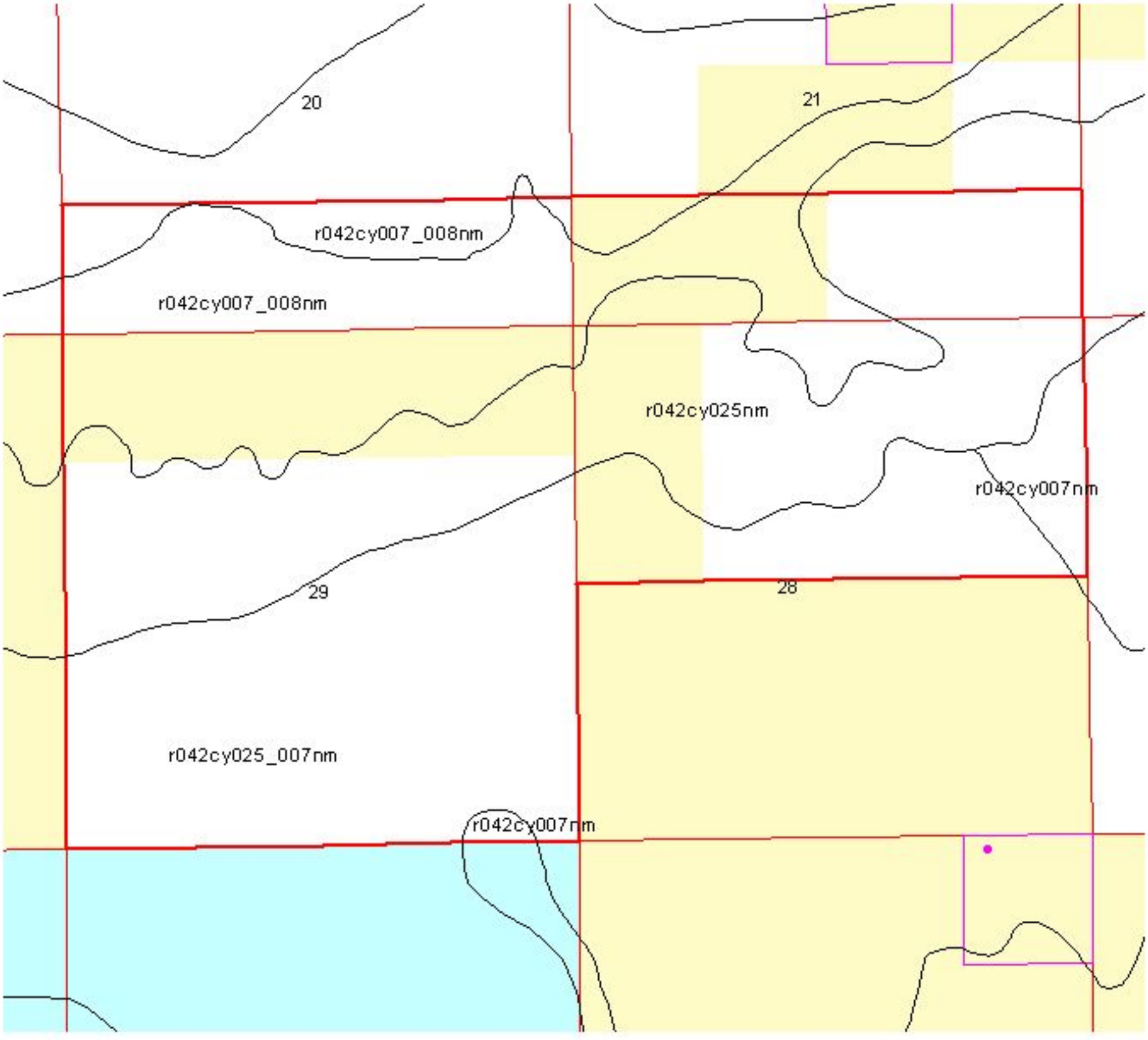

4. 15. 2004


4. 15. 2004

Rangeland Health Assessment
Ecological Sites

Allotment 64078

T14.R24E



T14S.R24E

0.3 0 0.3 Miles

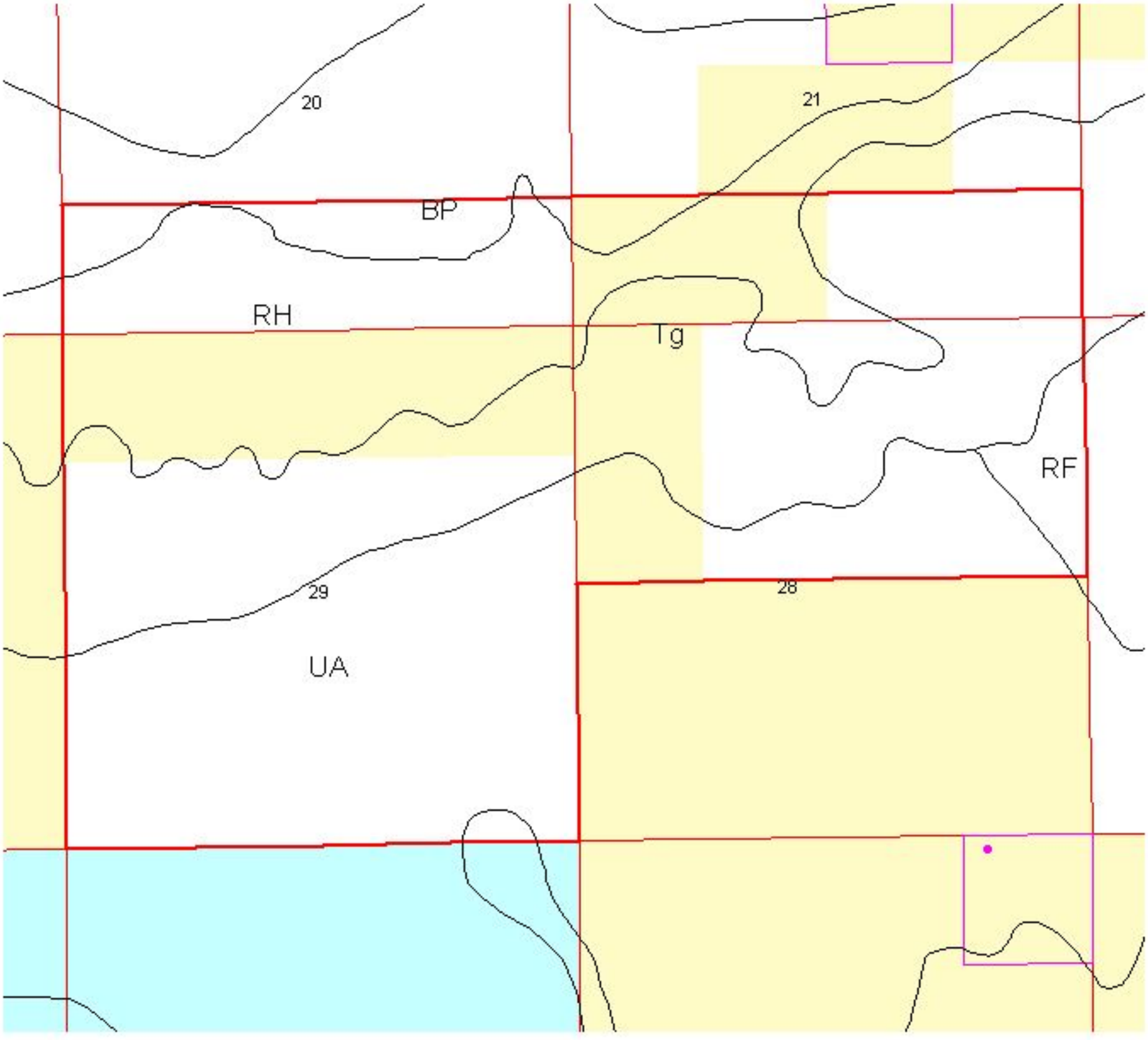
Public
Study Plots
State
Private
Study Locations
Ecological Sites
Allotment Boundary

Produced by the Roswell Field Office
GIS Intern on July 25, 2003.

Rangeland Health Assessment
Soil Mapping Units

Allotment 64078

T14.R24E



T14S.R24E

0.3 0 0.3 Miles

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